

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on May 28, 2010 has been entered.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 13, 14, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Sawahashi et al (US 5,768,306).

First consider claims 13, 17 and 18. The admitted prior art, depicted in Fig.1 and described “Description of the Related Art” of the present application shows a spread spectrum receiver/method that is used in a mobile station operating in a DS-CDMA communication system. The receiver performs a first correlation (1001) between a received signal and a pre-assigned spreading code (1012) and a second correlation (1005) between the received signal and a plurality of spreading codes (1006), based on the timing determined from the first correlation operation, page 8, line 18 – page 9, line 1. Further, the admitted prior art describes that the

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plurality of kinds of spreading codes comprises different candidates for a spreading inherent base station code. See page 3, lines 17-23 and page 8, line 21 to page 9, line 1.

The admitted prior art, though, fails to teach “a storage unit” for storing the received signal and “a control unit” using the stored signal for performing the first and second correlations.

Referring to Fig.4, Sawahashi et al discloses a sliding correlator used in a CDMA system for initial synchronization. A received signal is stored in a memory (43), col.6, lines 7-8, until a correct timing and PN sequence is identified. Specifically, the stored signal is read out from the memory at a rate higher than the chip rate under control of a control unit (41) and correlated with a pre-assigned spreading code. Col.6, lines 13-19. The phase of the spreading code is adjusted and correlated with the same received signal that is again read from the memory, until the correlation value exceeds a predetermined threshold. Col.6, lines 24-36. The storing of a received signal in a memory allows the same received signal to be repeatedly correlated with a spreading code, each time with a different phase, during one chip period so that a faster initial synchronization can be established. Col.6, lines 37-51. Furthermore, since the same spreading code would have been used for both the first and second correlations when the prior art references are combined as proposed by examiner, it is only natural that the received signal must be stored in the storage unit, i.e., a memory, for a period of time at least until both correlation determinations have been performed.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to provide a storage unit, i.e., a memory, for storing the received signal in the prior art receiver and a control unit to read the received signal from the memory to correlators (1001 and

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1005), which allows repeated correlation of the received signal with varying phases of a spreading code for the purpose of establishing a faster initial synchronization as taught by Sawahashi et al.

Regarding claim 14, all the subject matter identical to that of claim 13 has been discussed above, except for “determining which of the N (>2) spreading codes is attributable to the base station that has transmitted the received signal.” Page 10, lines 17- 22 describes determining a spreading used by a base station if the correlation value exceeds a predetermined value. In other words, one of spreading codes stored in the timing code storage circuit (1011) is identified as the spreading code after one or more correlation operations.

Response to Arguments

4. Applicant's arguments filed May 28, 2010 have been fully considered but they are not persuasive.

The claims have been amended. However, the amended claims are drawn to the substantially same subject matter, whose final rejections were affirmed by the Board of Appeals and Interference on March 31, 2010. The claims further defines that the plurality of kinds of spreading codes comprises different candidates for a spreading inherent base station code. However, at page 3, lines 17-23 and page 8, line 21 to page 9, line 1 AAPA teaches the use of several candidates for the second correlation determination for a spreading code that is not common to the base stations.

Claim 15 was previously cancelled and is stated as cancelled in the Remarks of the present response. Thus, claim is not considered. If it is to be reinstated, a new claim should be added.

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5. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y. Kim whose telephone number is 571-272-3039. The examiner can normally be reached on 8AM --5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin Y Kim/

Primary Examiner, Art Unit 2611